

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: GOOSE POND	Lake Area (ha): 224.20
Town: CANAAN	Maximum depth (m): 10.1
County: Grafton	Mean depth (m): 5.2
River Basin: Connecticut	Volume (m <sup>3</sup> ): 11769000
Latitude: 43°42'00" N	Relative depth: 0.6
Longitude: 72°05'30" W	Shore configuration: 1.90
Elevation (ft): 829	Areal water load (m/yr): 8.40
Shore length (m): 10100	Flushing rate (yr <sup>-1</sup> ): 1.60
Watershed area (ha): 4118.1	P retention coeff.: 0.57
% watershed ponded: 0.0	Lake type: artificial

BIOLOGICAL:

	19 January 1989	15 August 1988
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 60%	ASTERIONELLA 25%
#2	TABELLARIA 35%	CERATIUM 20%
#3		DINOBRYON 20%
PHYTOPLANKTON ABUNDANCE (cells/mL)		675.0
CHLOROPHYLL-A (µg/L)		4.20
DOM. ZOOPLANKTON (% TOTAL) #1	NAUPLII LARVAE 45%	NAUPLIUS LARVA 57%
#2	KERATELLA 18%	KELLICOTTIA 17%
#3	KELLICOTTIA 12%	KERATELLA 13%
ROTIFERS/LITER	126	18
MICROCRUSTACEA/LITER	140	36
ZOOPLANKTON ABUNDANCE (#/L)	270	54
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		4.8
BOTTOM DISSOLVED OXYGEN (mg/L)	8.3	0.0
BACTERIA (fecal col., #/100 ml) #1		< 1
#2		10
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.2  
Hypolimnion volume (m<sup>3</sup>): None

CHEMICAL:

Lake: GOOSE POND

Town: CANAAN

	19 January 1989		15 August 1988		
DEPTH (m)	2.5	6.0	3.0	7.0	9.0
pH (units)	6.7	6.4	6.9	6.1	6.0
A.N.C. (Alkalinity)	7.9	7.6	7.8	8.1	8.3
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.47	0.51	0.25	0.23	0.28
TOTAL PHOSPHORUS	0.010	0.047	0.005	0.009	0.013
CONDUCTIVITY ( $\mu$ mhos/cm)	38.8	38.4	35.5	36.5	36.7
APPARENT COLOR (cpu)	18	18	18	23	25
MAGNESIUM			0.56		
CALCIUM			3.5		
SODIUM			1.6		
POTASSIUM			0.50		
CHLORIDE	2	2	< 2		< 2
SULFATE	7	7	6		6
TN : TP	47	11	50		22
CALCITE SATURATION INDEX			3.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1988

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	1	1	4	Oligo.

COMMENTS:

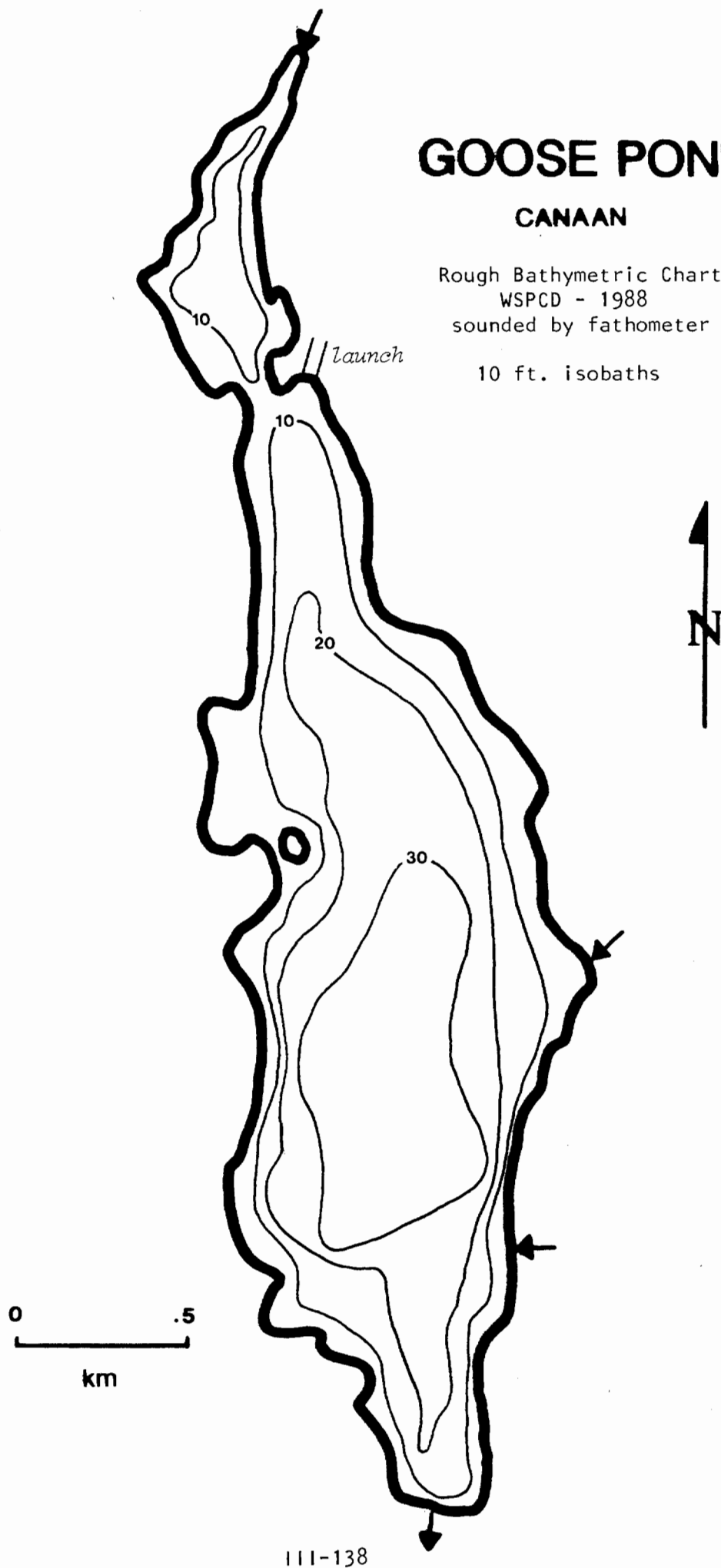
1. A good boat launch site was present with ample parking, but the launch was into very shallow water. Trash facilities at the launch site were good; no rest-rooms were available.
2. Approximately 36 motor boats were observed around the pond.
3. Much of the shoreline was rocky.
4. The bottom dissolved oxygen criterion was not used in the trophic rating because a well defined hypolimnion was not present. If bottom D.O. had been used, the pond would have received a mesotrophic rating.
5. Goose Pond was previously surveyed and classified in 1978. There was no change in water quality but the pond was rated mesotrophic in 1978 because the D.O. criterion was used (see comments in #4 above).

# GOOSE POND

CANAAN

Rough Bathymetric Chart  
WSPCD - 1988  
sounded by fathometer

10 ft. isobaths



[illegible]

TIME: 1250

COMMENTS: Although a thermocline was present, there was no typical hypolimnion; the temperatures continued to decrease substantially all the way to the bottom.

\*Dissolved oxygen values are in mg/L

# GOOSE POND

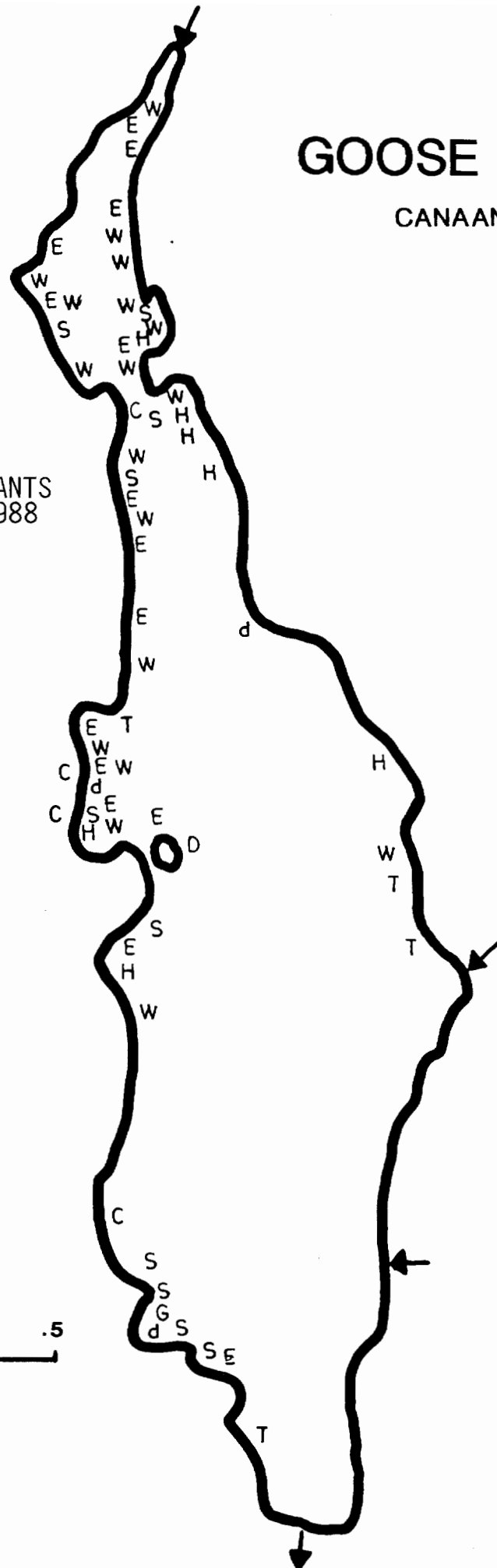
CANAAN

AQUATIC PLANTS  
15 AUG. 1988



0 .5  
km

III-140



[illegible]